

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Floyd Backes

Application No.: 10/780,798

Filed: 2/18/2004

Title: Distributed Protocol for Use in a Wireless
Network

Group Art Unit: 2617

Examiner: Holliday

Attorney Docket No.: 160-041

Mail Stop Appeal Brief-Patents

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 1.192

This Appellant's brief is hereby submitted in accordance with a Notice of Appeal
filed contemporaneously with this Brief.

I. Real Party in Interest

The real party in interest is Autocell Laboratories, Inc.

II. Related Appeals and Interferences

Appellants are not aware of any appeals or interferences that are related to the present case.

III. Status of the Claims

Claims 1-3 are pending in this application. Claims 1-2 were rejected and claim 3 was withdrawn. This is an appeal of the decision by the Examiner dated January 24, 2007, finally rejecting claims 1-2. None of the claims have been allowed. The rejection of claim 1 is the subject of this appeal.

IV. Status of Amendments

The most recently filed amendment was submitted November 13, 2006. Claim 1 was amended in the most recently submitted amendment, which was filed October 30, 2006. That amendment was entered by the Examiner.

V. Summary of Claimed Subject Matter

The subject matter of claims 1-2 is a radio control protocol for use by devices in a wireless communications environment wherein multiple channels are available for communication. The protocol includes channel claim messages,

presence announce messages, and for executing an association auction, bid and accept messages.

Support for the claim messages is in the specification at page 19, which describes that an access point advertises its intention to use a selected channel by periodically transmitting claim messages in a claiming period.

Support for the presence announce messages is in the specification at pages 28-29, which describe that once the access point is running on a channel, it conveys a TP_backoff parameter in announce messages. The TP_backoff value provides an indication of how far the sending access point has turned its transmit radio down. Further, the TP_backoff value is used by other access points to determine their own TP_backoff values, and a station that is associated to the access point can adopt the TP_backoff value to adjust its radio power.

Support for the auction bid and accept messages is in the specification at pages 41-43, which describe that the purpose of the auction is to distribute the stations across the access points in a manner that enhances performance by reducing RF footprints and avoiding overload of individual access points. In accordance with the embodiment described on page 41, a station “will send a Bid message to an AP that is “better” than the STA’s current AP, where better means that the AP has a lower biased distance.” Further, as described on page 42, the access point “selects the bid entries with the highest biased distance delta values, up to acceptsPerAuction entries, and sends a DRCP Accept message to each of the STAs 16 corresponding to those entries (step 360).”

VI. Grounds of Rejection to be Reviewed on Appeal

A. Claim 1 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

B. Claim 1 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio (US 2004/0014422 A1) in view of Kondo (US 2002/0191554 A1), and further in view of Feder (US 6,522,881 B1).

VII. Argument

A. The specification adequately supports the claim limitation of an announce message including an indication of intentional transmission power attenuation

As stated in MPEP section 2163, the written description requirement has several policy objectives. "[T]he 'essential goal' of the description of the invention requirement is to clearly convey the information that an applicant has invented the subject matter which is claimed." In re Barker, 559 F.2d 588, 592 n.4, 194 USPQ 470, 473 n.4 (CCPA 1977), cert. denied, 434 U.S. 1064 (1978). Another objective is to put the public in possession of what the applicant claims as the invention so that the public may ascertain if the patent applicant claims anything that is in common use, or already known. Evans v. Eaton, 20 U.S. (7

Wheat.) 356 (1822). An applicant's specification must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, i.e., whatever is now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). The written description requirement prevents an applicant from claiming subject matter that was not described in the application as filed, and the proscription against the introduction of new matter in a patent application (35 U.S.C. 132 and 251) serves to prevent an applicant from adding to the informational content of a patent application after it is filed.

The Examiner asserts that although the specification discloses power attenuation, it does not disclose announce messages which include an indication of intentional transmission power attenuation. However, the Examiner is mistaken because the specification describes at pages 28-29 that once the access point is running on a channel, it conveys a **TP_backoff parameter in announce messages**. The specification further states in the sentence spanning pages 28-29 that “the TP_backoff value provides an **indication of how far the sending access point has turned its transmit radio down.**” (emphasis added) The described TP_backoff parameter is clearly an indication of intentional transmission power attenuation.

B. The cited combination fails to suggest sending announce messages which include an indication of the magnitude by which transmission power is intentionally reduced by the fixed location device

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Appellants assert that the combination of Kallio, Kondo and Feder fails to disclose or suggest the claimed limitation of “transmission of presence announce messages by the fixed location devices, messages being indicative presence of the transmitting device, magnitude of intentional transmission power attenuation by the transmitting device, and protocol capability of the transmitting device.”

The Examiner asserts that although the other references fail to teach the quoted limitation, Kondo does so at paragraph 64. In particular, the Examiner states that “the mobile station calculates a propagation attenuation factor by radio propagation of a notification signal on the basis of transmission power information contained in the notification signal from each of the three extracted radio base stations.” However, the Examiner has mistaken transmission power with transmission power attenuation. As will be discussed below, this is not a trivial distinction.

Kondo is attempting to evaluate a device based on calculated position. In particular, position is calculated from transmissions by using propagation attenuation as an indication of distance. Propagation attenuation is calculated by comparing transmit power with receive power. In contrast, the presently claimed invention is directed to evaluating an access point for association, where the access point may be operating at partial power. Unlike Kondo, this does not require signaling transmit power and then calculating propagation delay. Note that the claim limitation is that the access point signals its attenuation, where attenuation means transmit power reduction by the access point rather than propagation attenuation. The station can then evaluate the access point by comparing transmit attenuation with received signal strength. For example, if the received signal strength is 0.2 dBm (poor) and the transmit attenuation is 0 dB, then the access point is a poor candidate. However, if the received signal strength is 0.2 dBm (poor) and the transmit attenuation is 20 dB, then the access point is a good candidate because it can increase transmit power to an acceptable level. Note that it is not necessary for the station to learn the actual transmit power of the access point because the transmit attenuation by the access point is what is important. Note also that Kondo's station would have no idea that the access point was operating at partial transmit power from the signaled transmit power level.

C. The cited combination fails to suggest that the decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service as a function of magnitude of intentional transmission power attenuation by the particular fixed location device

As stated above, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Appellants assert that the combination of Kallio, Kondo and Feder fails to disclose or suggest the claimed limitation of “transmission of an association bid message from a mobile wireless terminal device to a particular fixed location device, the bid message being a request to communicate in the wireless communications environment via the particular fixed location device, and wherein a decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service as a function of magnitude of intentional transmission power attenuation by the particular fixed location device.”

The Examiner asserts that although the other references fail to teach the quoted limitation, Feder does so at column 2, lines 59-63 and column 3, lines 6-10. In particular, the Examiner states that “after detecting beacons and obtaining

a communication link quality metric for each neighboring access point, the wireless modem selects the best access point based on the communication link quality metric, reading on the claimed ‘a decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service.’” However, the Examiner has not considered the limitation “wherein a decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service as a function of magnitude of intentional transmission power attenuation by the particular fixed location device.”

Feder specifically describes the link quality metric as being “one of signal strength at the WM 270, signal strength at the AP 210, and signal quality at the AP 210, or a combination of two or more of these measurements.”¹ Since none of those measurements is indicative of magnitude of attenuation by the access point, it follows that the link quality metric is not analogous to the claimed transmission power attenuation indication. Therefore, claim 1 distinguishes the cited references by reciting that the decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service as a function of magnitude of intentional transmission power attenuation by the particular fixed location device.

¹ Column 6, lines 41-46

VIII. Conclusion

Appellants submit therefore that the rejections of the present claims under 35 U.S.C. 112, and under 35 U.S.C. 103 based on the combination of Kallio and Kondo and Feder are improper for at least the reasons set forth above. Appellants accordingly request that the rejections be withdrawn and the case put forward for allowance.

Respectfully submitted,

Autocell Laboratories, Inc.

By:
/Holmes W. Anderson/
Holmes W. Anderson
Reg. No. 37,272
Attorney for Assignee

Date: February 27, 2007

McGuinness & Manaras LLP
125 Nagog Park
Acton MA 01720
(617) 630-1131

Appendix A - Claims

1. (previously presented) A radio control protocol for use by devices in a wireless communications environment wherein multiple channels are available for communication, comprising:

transmission of channel claim messages by ones of a plurality of fixed location wireless devices operable to provide network access, each channel claim message being indicative of an intent to utilize a channel for communications with associated mobile wireless terminal devices at some subsequent point in time, wherein each fixed location device uses the claim messages it sends and receives to select a channel on which to communicate;

transmission of presence announce messages by the fixed location devices, the announce messages being indicative of presence of the transmitting device, magnitude of intentional transmission power attenuation by the transmitting device, and protocol capability of the transmitting device; and

an association auction including:

transmission of an association bid message from a mobile wireless terminal device to a particular fixed location device, the bid message being a request to communicate in the wireless communications environment via the particular fixed location device, and wherein a decision to send a bid message is based at least in-part on an indication that the receiving device is capable of providing better service as a function of magnitude of intentional transmission power attenuation by the particular fixed location device; and

transmission of an accept message by the particular fixed location device in response to the bid message, the accept message indicating that the particular fixed location device will allow the wireless terminal device which transmitted the bid message to communicate in the wireless communications environment via the particular fixed location device, and wherein the particular fixed location device does not send an accept message to the wireless terminal device which transmitted the bid message if the particular fixed location device determines to not accept the request to associate.

2. (previously presented) The protocol of claim 1 further comprising:

exchange of registration request messages between devices, wherein a sending device sends a registration request message to a receiving device to indicate that the sending device desires to communicate in the wireless communications environment via the receiving device using the radio control protocol;

exchange of registration acknowledge messages between wireless devices, wherein a sending device sends a registration acknowledge message to a receiving device in response to a registration request message, to indicate that the sending device understands that the receiving device will communicate in the wireless communications environment using the radio control protocol.

3. (cancelled)

Appendix B - Evidence Submitted

None.

Appendix C - Related Proceedings

None.